PLANNED PARENTHOOD ADVOCATES OF WISCONSIN

TESTIMONY OF PLANNED PARENTHOOD ADVOCATES OF WISCONSIN IN SUPPORT OF SB 398
The Women's Health & Safety Act

My name is Chris Taylor and I am the public policy director for Planned Parenthood Advocates of Wisconsin. I greatly appreciate the opportunity to testify before the Senate Health committee today in support of this long overdue change to the Wisconsin statutes. Planned Parenthood Advocates of Wisconsin strongly supports SB 398, the Women's Health & Safety Act and encourages this committee to pass the bill immediately.

Unlike the people and groups who want to criminalize abortion, Planned Parenthood does everything within our power to support access to birth control and education so that people do not find themselves faced with an unintended pregnancy. Each year, we serve over 70,000 patients throughout the state by providing breast and cervical cancer screening and cervical cancer treatments, sexually transmitted infection testing and treatment, pregnancy counseling and access to birth control methods, and abstinence-based, age-appropriate sex education.

Why is Planned Parenthood so committed to prevention based health services? Not only because it makes good public policy sense, but because we know the most effective ways to reduce incidences of unintended pregnancies and abortion is through access to birth control and education. Countries that have the lowest abortion rates in the world, like the Netherlands, have widespread access to birth control and comprehensive sex education that includes information about abstinence and contraception.

Contrary to Planned Parenthood's efforts, those who want to criminalize abortion throw up road block after road block for women wanting access to birth control. Inexplicably, those who oppose abortion often oppose birth control too.

Planned Parenthood is one of only three abortion providers in the state of Wisconsin, providing abortion services in Appleton and Milwaukee. What we know at Planned Parenthood and what we see around the world is that when abortion is illegal, women continue to have abortions, but they are unsafe. The result is that women die.

According to the World Health Organization, unsafe illegal abortion is one of the most easily preventable and treatable causes of maternal mortality. (WHO, Address Unsafe Abortions, 1998). There are an estimated 19 million illegal, unsafe abortions every year. About 5.2 million of these women are hospitalized for serious complications. Another 68,000 die each year, making illegal abortions a significant cause of maternal mortality—13% of all maternal deaths are attributed to illegal abortion.

And you can look at any country in the world where abortion is illegal and maternal mortality rates are through the roof.

- In Peru, about 350,000 illegal abortions occur every year resulting in one of the highest maternal mortality rates in the region (about 240 deaths for every 100,000 live births—the U.S. maternal mortality, for comparison, is currently 7.5 deaths for every 100,000 live births). (Breaking the Silence: the Global Gag Rule's Impact, CRR 2003).

- In Kenya, about 300,000 illegal abortions occur each year with official statistics estimating that they cause 30-50% of all maternal deaths in the country. (Break the Silence, African News, Aug 30, 2006).

That is why the trend of most countries is to repeal criminal abortion laws. In 2002, the Ethiopian Ministry of Health reported that unsafe abortion complications were the 5th leading cause of hospital admission and the 2nd leading cause of death among hospitalized women. 55% of maternal mortalities were caused by unsafe abortions. In response to the high maternal mortality rates, Ethiopia liberalized its criminal abortion law in 2004. Since 1995, 17 countries have moved to liberalize abortion access. These nations include Colombia, Ethiopia, Portugal and South Africa. On the other hand, only three countries have tightened abortion restrictions: El Salvador, Nicaragua and Poland. (Center for Reproductive Rights, 2007). Does Wisconsin want to be grouped with third world countries on this issue?

If you looked in our statute books, you would think so. We are only one of four states that maintain a pre-*Roe v. Wade* (1973) criminal abortion statute on the books. Wisconsin is the only state in this country whose abortion statute contains criminal penalties for both women and physicians. Wis. Stat. §940.04 bans abortions unless two physicians certify that a woman will die if she continues a pregnancy. Under the law, physicians charged could be jailed up to 15 years and fined up to $50,000 and women charged could be jailed up to 3 ½ years and fined up to $10,000.

This law has been in our statutes since 1849, which was indeed a different time. The inhumane cruelty of slavery existed in many parts of the country. The civil war would not be fought for another 15 years. Cars wouldn't be invented for another 50 years and women wouldn't get the right to vote for another 70 years. Since *Roe v. Wade* in 1973, Wisconsin's criminal abortion statute has not been enforced. We should never go back to a time when abortion was criminal.

And Wisconsinites by wide margins do not want to return to the days of back alley abortions. We want to move forward and focus our efforts not on abortion but on prevention. According to a June, 2007 Mark Mellman poll, 75% of Wisconsin voters oppose criminalizing abortion, including 87% of Democrats, 74% of independents and 64% of Republicans. 69% of voters want Wisconsin's criminal abortion statute to be repealed at some point, including 72% of voters in the Madison media market, 70% of voters in the Green Bay media market, 65% in the Lacrosse/Wausau media markets and 72% in the Milwaukee media market (4/07 Mellman poll). In a February, 2008 Celinda Lake poll, an overwhelming 74% of likely voters indicated that a legislator's support of criminal penalties for a woman and physician who participate in an abortion even in cases of rape, incest and to protect the health of a woman raised serious doubts about that legislator.

Planned Parenthood and Wisconsin Right to Life do agree on two things. The first is that *Roe v. Wade* is in grave danger and the second is that this terrible criminal statute would go into effect if *Roe* is reversed by the U.S. Supreme Court. Wisconsin Right to Life has stated "Our Wisconsin ban, s.940.04 of the statutes, would immediately shut down Wisconsin abortion clinics once *Roe v. Wade* is overturned." Indeed, we are closer than we have ever been to a reversal of the federal protections in *Roe* and have already seen the Bush court go far in restricting access to abortion by

upholding the first abortion restriction ever in this country's history that does not include an exception for a woman's health.

But that is where our agreement ends. At Planned Parenthood, as indicated above, we know the dire health consequences for women when abortion is illegal. Besides that, in Wisconsin, women would risk being sent to jail if § 940.04 becomes enforceable. The criminal abortion statute treats women who have abortions as felons with prison time provided. This language is quite clear from the § 940.04 law. However, in 1985, Wis. Stat. § 940.13, was passed exempting women from prosecution for obtaining an abortion or otherwise violating any provision of any abortion statute. So what are we to do with this conflict in the law? Why didn't the legislature simply remove the criminal penalties in § 940.04 instead of passing a conflicting law?

Furthermore, why is this discussion relevant? Because the question of which statute controls will ultimately be left to a court to interpret whether women will be sent to jail or not under 940.04.

The passage of § 940.13 in direct conflict with § 940.04 creates an ambiguity in the law. Under rules of statutory construction, when two conflicting statutes on the same subject create an ambiguity, the court looks to the scope, history, subject matter and object of the statute. (*Return of Property in State v. Jones*, 226 Wis.2d 565 (1999)). In light of this ambiguity, a court would be required to examine the legislative intent behind § 940.13. A review of the legislative history—starting with the first 1985 draft (LRB 4124/1) and continuing through the final act (85 Wis Act 56) clearly demonstrates that the legislature DID NOT intend to repeal the criminal penalties for women. The original LRB draft was a complete repeal of § 940.04 and a re-created a statute that criminalized post-viability abortions, sending only physicians to jail. Eventually an assembly substitute amendment, which removed the repeal language and instead created two new stand alone statutes, was adopted. The intent to keep § 940.04 completely intact is demonstrated by this history. Further evidence of this intent is demonstrated by specific amendments in the Senate that would have completely repealed § 940.04, leaving no conflict in the law. The legislature was clearly aware of the conflict, as it had been directed by the Legislative Reference Bureau to use the more specific language exempting women from the very specific statutory sections §§ 940.03(3) and (4). All of those attempts were rejected by the legislature.

This is an example of the analysis a court would be required to entertain. However, anyone who has ever litigated any issue in front of a court knows you can not predict what a court will do in any given case. Certainly, judges bring their own opinions and biases to cases. And certainly, it is absurd for WRTL to claim that they know what every judge in Wisconsin would do if faced with what criminal penalties a woman should receive who has an illegal abortion. Wisconsin Right to Life obviously thinks that judges do have certain philosophies and opinions they bring to the bench, or they would not have endorsed one of the judicial candidates in the current state Supreme Court race.

The bottom line is that there is not a clean cut answer since no Wisconsin court has ever interpreted the ambiguity created by this statutory conflict. The only way to ensure that women are never prosecuted in Wisconsin is to repeal that language from our statues. And unless you want to eventually throw women in jail for obtaining an abortion, there really is no good reason to maintain the language in our laws.

But this is not just a bad law because it threatens to throw women in jail. The law also would imprison physicians who perform abortions in Wisconsin—even if the woman seeking an abortion

is a victim of rape or needs an abortion to preserve her health. When the government criminalizes abortion, good doctors are no longer available to care for women facing unintended pregnancies. These women, faced with the desperate situation of facing unintended pregnancies are forced to turn to dangerous, back-alley abortions.

It is also bad law because women who are raped or who have a health issue develop in a pregnancy will be left with no options if abortion is illegal. Here is the story of Christine Merkel, one Wisconsin woman, who had a pregnancy go wrong and needed an abortion because her health was in danger. When she was 18 weeks pregnant, her water broke. These are her words:

> Unfortunately, when one's water breaks this early in a pregnancy both the mother and baby are doomed unless action is taken. Infection that can be fatal to both sets in quickly, often within 24 hours. My husband and I were informed that we had the option of placing me in a secure isolation chamber to ward off infection so as to continue the pregnancy, but were also informed that even in the extremely rare case my body could continue to support the pregnancy, our son had virtually no chance.
>
> Since amniotic fluid is critical for lung development, babies born to women who have prematurely ruptured their membranes (PROM) usually have severe breathing problems and short lives. Live births PROM cases have only been documented in pregnancies lasting far longer than 18 weeks. In my case, the attending doctor relayed that a live birth was really only "theoretically" possible and that given the risk of infection to me, he would not advise attempting to continue the pregnancy.
>
> Despite our grief at the impending loss of a 3rd pregnancy, especially so late, we came to the conclusion that moving to the isolation chamber was not the best option and that we would let nature take its course. We did not fully understand at the time that letting nature take its course would result in both my and my son's death. Instead we had to decide whether or not to actively induce labor or schedule a dilation and extraction procedure. We were advised to do one or the other quickly so as to avoid the infection that would most certainly come.
>
> The risks of inducing labor in the 2nd trimester, also considered an abortive procedure, are many. Often it takes an extremely long time for the delivery as the body resists to deliver a baby that it fundamentally knows is not ready to be born. In addition, there is often difficulty in delivering the placenta which poses a much greater risk of hemorrhage. The added time in the hospital is also a consideration as it means more time away from home, work and family obligations.
>
> Although it was only one day/night, it seemed like after an eternity of consideration, my husband and I decided that we would induce labor. We weighed absolutely everything in this decision including the impact on my daughter, the potential trauma for our son (who at that point was still kicking strongly), my health and safety, as well as the emotional trauma of a drawn out ordeal. Eventually, even though we knew our chosen option was 1) less "safe" in regard to my own health, 2) more painful for me, 3) required a longer hospital stay and 4) my son would be stillborn, I wanted a chance to hold my son and say goodbye in person.
>
> As I'm sure you can imagine this was a very traumatic event in my life. I made decisions during that last week of March 2002 with my husband and in consideration of our family. We felt that despite our strong connection to our unborn son, we needed to make decisions for the future and in the interest our strong and healthy 18 month old daughter who needed her mother.

Know that women who make decisions to terminate a pregnancy, especially into the 2nd trimester do not come to their decision lightly. As practicing Catholics we actually considered whether or not we should let "nature take its course" and then decided that my life and the need of our daughter to have her mother were more important than betting on a miracle.

You need to understand. We have our son's framed footprints in our living room and I have saved his hospital blanket along with other mementos from that pregnancy. He has a memorial tree in a national forest, and donations are made annually in his name. Benjamin was my son and yet I chose to take a course of action that would prematurely (granted only by a couple of hours) end his life because it was the best option for my family. Please don't insult me and other women like me (or unlike me for that matter) by assuming that we don't already consider absolutely everything, including things you could never even imagine to legislate about, in making such an impossible decision.

Please do not tell us and our families that our health doesn't matter. We need to be told everything, to be given ever option available. And then we, with our families and physicians, need to make the decision. Please don't take that away from us.

This story really perfectly illustrates why this criminal abortion statute must come off the books now. We should never tell women that they need to risk their own health rather than have a safe, legal abortion.

Please, for the sake of the health and lives of Wisconsin women, repeal this statute now. Support the Women's Health and Safety Act.

Feb. 27, 2008

My name is Vera Faith Lord, and I am testifying in opposition to Senate Bill 398.

I was 34 years old when I killed my son. If I had allowed him to live, he would have been born on my 35th birthday, & he would have turned 25 this past August. I was 21 weeks pregnant. Up until 2 days before the abortion, I didn't know I was pregnant. I'd had 2 negative pregnancy tests & 2 Doctors tell me I could never get pregnant. I thought I had a tumor – I thought I was dying.

On the night my son was conceived, I not only got him, I got a black eye, a broken jaw, & a broken rib. I was in a dysfunctional, abusive marriage, & I was using alcohol, cocaine, & amphetamines – In short, I was the Poster Child for the so-called "justifiable abortion". On the advice of a Doctor, a clergyman, & everyone around me, I went ahead & I did it: I had the abortion. --- Now we'll talk about Afterward.

At some point after the abortion, (the time frame varies from woman to woman) an interesting thing happens: Mother Nature shows up –Big-Time – in the form of the strongest instinct on the planet –the Maternal Instinct. It's stronger than survival, & it's alive & well in all of us who are female, whether we want it or not. It appears in full Primal force, & we have one awful moment when we KNOW that we have killed our child.

It's like putting your hand into fire, & holding it there – Everything in you screams to pull back – run away -- & that's what we do: We spend the rest of our lives running away from that moment – It's called Post-Abortion Syndrome & it's the worst feeling in the world.

If we really could run away, that would almost make it all right, but we can't -- & the reason we can't is that we have a **DEAD BABY** – no less than the mother whose baby died in any other way. The fact that we participated in the killing, doesn't make the baby any less dead.

When someone dies, you **MUST** acknowledge, grieve & mourn that death. – If you cannot, you're in serious psychological trouble – They call it Impacted Grief & it's a big part of Post Abortion Syndrome, along with migraines, eating disorders, relationship problems, inability to bond, & many others. We who are Post-Abortive have lifestyles ranging from Compulsive Perfectionism down to Suicidal Self-Destruction.

There is a healing process. When I began my healing in 1997, I did lots of research & I discovered that in 1997 – 10 years ago – there had been 9 books written & there were 21 national organizations just to help Post-Abortive mothers (& fathers). You've probably never heard of any of them, & there's a good reason why you haven't.

If you knew about all that, you'd know the dirty little secret behind the door called "Choice" – The baby is not the only one who dies – big parts of his mother die right along with him. It doesn't get better – she keeps on dying spiritually, psychologically, emotionally, & sometimes physically until something either shakes her out of denial, & she begins the healing process OR she takes her Post abortion Syndrome to her grave ----- never connecting the dots, never realizing that her migraines, her eating disorders, her inability to bond –all stem back to something she may have done 20 or 30 or 40 years ago – something she THINKS she feels perfectly OK about. --- Something society tells her she MUST feel OK about.

Everyone here today knows someone who's had an abortion. Statistics say you know more than one of us. We are your mothers, grand mothers sisters, daughters, wives, friends, & co-workers. We're all around you. If you're thinking you don't know anyone, there's only one reason: You don't know who it is yet.

Many say "I do know someone & she seems to be OK" – she's not. There's research being done right now that says Post Abortion Syndrome is hormonal – How she feels intellectually about the abortion simply doesn't matter. It's literally her own body not allowing her to forget.

One of the steps in our healing process is to name the baby who has died, & to finally accept, grieve, & mourn that death – That may sound morbid, but it's a very healthy, very necessary thing that we need to do to get better.

My son's name is Gabriel. About a year after my healing began, I saw a woman carrying a baby boy about a year old through a doorway. She walked a little too close to the door, & he hit his head & began to shriek as only a one-year-old can. She stood him up, kneeled down in front of him, & rubbed his head, saying "Oh Mommy's sorry you hit your head" --- Just like turning off a light switch, the shrieking stopped & she had made it all better.

I thought nothing of it at the time, but it resonated in my sub-conscious, & about 8 hours later, I found myself on the floor in my living room, rocking back & forth, & sobbing & talking to my son, saying "Gabriel, Mommy is sorry --- Mommy is so sorry".

You have no idea what that feels like. ---- I'm glad it happened because it's part of my healing process. --- I am here today speaking to you so that neither you nor anyone you care about will ever have to experience a moment like that, because you'll never have to heal from something like what I did.

I urge you to vote against Senate Bill 398.

WISCONSIN LEGISLATIVE COUNCIL

Terry C. Anderson, Director
Laura D. Rose, Deputy Director

TO: SENATOR CAROL ROESSLER

FROM: Laura Rose, Deputy Director

RE: Criminal Abortion Statute Exception for Women Who Obtain an Abortion

DATE: February 22, 2008

This memorandum responds to your question as to whether s. 940.13, Stats., which prohibits prosecution of a woman who obtains an abortion, or s. 940.04, Stats., which imposes a criminal penalty on a woman who obtains an abortion, would be in effect were *Roe v. Wade* overturned. Because s. 940.13, Stats., was enacted after s. 940.04, Stats., it appears that a court would find that it is the Legislature's intent that s. 940.13, Stats., be given effect.

Current s. 940.04, Stats., penalizes a pregnant woman for obtaining an abortion or consenting to an abortion, as follows:

- Any pregnant woman who intentionally destroys the life of her unborn child or who consents to such destruction by another may be fined not more than $200 or imprisoned not more than six months or both.

- Any pregnant woman who intentionally destroys the life of her unborn quick child or who consents to such destruction by another is guilty of a Class I felony.

[s. 940.04 (3) and (4), Stats.]

This statute was enacted in 1969. The statute is unenforceable as applied to consensual, pre-viability abortions under *Roe v. Wade*, 410 U.S. 113 (1973).

In 1985, the Legislature enacted another criminal statute prohibiting abortion that complies with the holding in *Roe v. Wade*. In the same legislation, the Legislature enacted the following provision relating to prosecution of a pregnant woman:

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> No fine or imprisonment may be imposed or enforced against and no prosecution may be brought against a woman who obtains an abortion or otherwise violates any provision of any abortion statute with respect to her unborn child or fetus, and s. 939.05, 939.30 or 939.31 does not apply to a woman who obtains an abortion or otherwise violates any provision of any abortion statute with respect to her unborn child or fetus.

[s. 940.13, Stats.]

Standing together, ss. 940.04 and 940.13, Stats., cannot be reconciled because one imposes penalties on a woman undergoing an abortion and the other prohibits imposing penalties on such a woman. When two statutes cannot be reconciled, the general principle of statutory construction is that courts will try to harmonize the two statutes so that both can be given effect. However, if two statutes cannot be harmonized, courts will then apply the rule that the statute that was enacted later will prevail. [*State ex rel. Mitchell v. Superior Court of Dane County*, 14 Wis. 2d 77, 109 N.W.2d 522, 524 (S. Ct. 1961).]

If you have any questions, please feel free to contact me directly at the Legislative Council staff offices.

AS:jb;wu

Exhibit B:

Fergusson et al. (2006)

Journal of Child Psychology and Psychiatry 47:1 (2006), pp 16–24 doi:10.1111/j.1469-7610.2005.01538.x

Abortion in young women and subsequent mental health

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Christchurch Health and Development Study, Christchurch, New Zealand

Background: The extent to which abortion has harmful consequences for mental health remains controversial. We aimed to examine the linkages between having an abortion and mental health outcomes over the interval from age 15–25 years. **Methods:** Data were gathered as part of the Christchurch Health and Development Study, a 25-year longitudinal study of a birth cohort of New Zealand children. Information was obtained on: a) the history of pregnancy/abortion for female participants over the interval from 15–25 years; b) measures of DSM-IV mental disorders and suicidal behaviour over the intervals 15–18, 18–21 and 21–25 years; and c) childhood, family and related confounding factors. **Results:** Forty-one percent of women had become pregnant on at least one occasion prior to age 25, with 14.6% having an abortion. Those having an abortion had elevated rates of subsequent mental health problems including depression, anxiety, suicidal behaviours and substance use disorders. This association persisted after adjustment for confounding factors. **Conclusions:** The findings suggest that abortion in young women may be associated with increased risks of mental health problems. **Keywords:** Abortion, pregnancy, mental disorder, depression, anxiety, suicidal behaviour, substance dependence.

There have been ongoing debates about the issue of abortion as a response to unwanted pregnancy. These debates have centred around a series of ethical, religious and other issues concerning the rights of the fetus and the mother in circumstances of unwanted pregnancy (Blanchard, 2002; Chen, 2004; Major, 2003). Although much of the debate in this area has focused on ethical issues, it has also involved empirical concerns about the linkages between unwanted pregnancy, abortion and long-term mental health.

Specifically, a number of authors have proposed that abortion may have longer-term adverse mental health effects owing to feelings of guilt, unresolved loss and lowered self-esteem (Ney, Fung, Wickett, & Beaman-Dodd, 1994; Speckhard & Rue, 1992). These concerns have been most clearly articulated by Reardon and colleagues who claim that abortion may increase risks of a wide range of mental disorders, including substance abuse, anxiety, hostility, low self-esteem, depression and bipolar disorder (Cougle, Reardon, & Coleman, 2003; Reardon & Cougle, 2002; Reardon et al., 2003). Despite such claims, the evidence on the linkages between abortion and mental health proves to be relatively weak with some studies finding evidence of this linkage (Gissler, Hemminki, & Lonnqvist, 1996; Reardon & Cougle, 2002; Reardon et al., 2003) and others failing to find such linkages (Gilchrist, Hannaford, Frank, & Kay, 1995; Major et al., 2000; Pope, Adler, & Tschann, 2001; Zabin, Hirsch, & Emerson, 1989). Furthermore, the studies in this area have been marked by a number of design limitations, including the use of selected samples, limited length of follow-up, retrospective reports of mental health prior to abortion, and failure to control confounding (Adler, 2000; Major et al., 2000).

Perhaps the most comprehensive analysis of this topic is provided by an analysis of the National Longitudinal Study of Youth (NLSY) reported by Cougle et al. (2003). This analysis found that women who reported induced abortion were 65% more likely to score in the high-risk range for clinical depression than women whose pregnancies resulted in birth. This association was evident after control for a number of prospectively assessed confounders including pre-pregnancy psychological state. However, there were potential limitations of this study. First, the study failed to provide comprehensive control of pre-pregnancy factors, with the analysis being limited to the data available from the NLSY. Second, there was evidence of substantial underreporting of abortion in the study, with an estimated 60% of those undergoing induced abortion failing to report this (Cougle et al., 2003).

A threat to study validity in this area arises from uncontrolled confounding (Major, 2003). In particular, evidence linking abortion to higher rates of subsequent mental disorder is consistent with two explanations. The first is that these associations reflect a cause and effect linkage in which exposure to abortion has adverse effects on subsequent mental health. The alternative is that the association arises because abortion is associated with third or confounding factors that are also related to mental health outcomes. There are several potential sources of confounding relating to pre-abortion background. These include: socio-economic factors; childhood and family factors; mental health and personality factors. To date, the control of such factors in studies

Published by Blackwell Publishing, 9600 Garsington Road, Oxford OX4 2DQ, UK and 350 Main Street, Malden, MA 02148, USA

of the mental health effects of abortion has been limited. A further class of factors that may also confound the association may relate to the woman's circumstances at the time of pregnancy, including age, the planning of pregnancy, and the stability of partnerships (Adler, 1992; Major, 2003).

In most studies to date, comparisons have been made between those who became pregnant but did not seek abortion and those who became pregnant and sought an abortion. Those women who were not (yet) pregnant were excluded from the analysis. Whilst it may seem intuitively reasonable to exclude the not pregnant group from analysis, the omission of this group leads to a problem of interpretation. In particular, the finding that rates of mental health problems are higher amongst those women having abortions than those women becoming pregnant and not seeking abortion is consistent with two quite different interpretations. First, the results are consistent with the view that exposure to abortion leads to an increased susceptibility to subsequent mental health problems. However, the alternative explanation is that pregnancy without abortion is beneficial for mental health. To distinguish between these alternatives requires that results for the not pregnant group are included in analysis to provide a reference by which the direction of association may be determined.

Against this background, this paper reports an analysis of the linkages between abortion in young women aged 15–25 and subsequent mental health in a birth cohort of young women studied to the age of 25. The specific aims of this analysis were:

1. To examine the extent to which mental health outcomes in the interval 15–25 years varied between the three pregnancy status groups: not pregnant by age 25; pregnant no abortion; pregnant abortion.
2. To adjust any association between mental health outcomes and pregnancy status groups for confounding pre-pregnancy factors, including social background, childhood and family history; mental health and personality factors.
3. To use the results of a covariate adjustment method to estimate the adjusted rates of mental disorders in the pregnant no abortion and not pregnant groups relative to rates of mental disorders in the pregnant abortion group.

Methods

The data used in this analysis were gathered over the course of the Christchurch Health and Development Study (CHDS). The CHDS is a longitudinal study of a birth cohort of 1265 children born in the Christchurch (NZ) urban region who have been studied from birth to age 25 years. The present analysis is based on the cohort of female participants for whom information on pregnancy history and mental health outcomes was available. The sample sizes used in the analysis range between 506 and 520 depending on the timing of assessment of pregnancy history and mental health. These samples represent between 80% and 83% of the original cohort of 630 females. All data were collected only on the basis of signed consent from research participants. The study had ethical approval from the Canterbury Ethics Committee.

Pregnancy and abortion 15–20 years

In New Zealand, the provision of legal abortion is determined by the Contraception, Sterilisation and Abortion Act, 1977 and overseen by the Abortion Supervisory Committee. The Act requires that certain criteria are met before allowing a woman to undergo a legal abortion. Firstly, women must approach their doctor and are then referred to specialist consultants. Two certifying consultants must then agree: 1) that the pregnancy would seriously harm the life, physical or mental health of the woman or baby; or 2) that the pregnancy is the result of incest; or 3) that the woman is severely mentally handicapped. An abortion will also be considered on the basis of age, or when the pregnancy is the result of rape. Abortions in New Zealand are free, and legal for all ages, and parental consent is not required for women under the age of 16. Counselling is required for all women considering an abortion (Ministry of Health, 1998).

Sample members were interviewed at ages 15, 16, 18, 21 and 25 about pregnancy and abortion occurring since the previous assessment. These reports showed that by age twenty five, 205 women (41% of the cohort) had become pregnant on at least one occasion and 74 (14.6%) reported seeking and obtaining an abortion at least once. In total there were 422 pregnancies reported prior to age 25. Of these, 90 were terminated. To cross-validate self-report data, the study estimates were compared with officially recorded pregnancy and abortion statistics for New Zealand (Abortion Supervisory Committee, 2002). These comparisons suggested some underreporting of abortion. The observed rate of abortion by age 25 in the cohort (178 per 1,000) was 81% of the rate expected based on population figures (220 per 1,000). This difference was statistically significant ($p < .05$).

Mental health 15–25 years

At ages 16, 18, 21 and 25 years, participants were questioned about mental health issues since the previous assessment using questionnaires based on the Diagnostic Interview Schedule for Children (DISC) (Costello, Edelbrock, Kalas, Kessler, & Klaric, 1982) at age 16 years and the Composite International Diagnostic Interview (CIDI) (World Health Organization, 1993) at ages 18–25 years, supplemented by additional measures. From this questioning it was possible to ascertain the proportion of young women who met DSM-IV criteria for the following disorders during the intervals 15–18, 18–21 and 21–25 years: a) major depression; b) anxiety disorders (including generalised anxiety, panic disorder, agoraphobia, social phobia and

specific phobia); c) alcohol dependence; d) illicit drug dependence. In addition, measures of DSM-IV disorders were supplemented by measures of self-reported suicidal ideation and attempts.

Covariate factors

Measures of family socio-demographic background. (a) Maternal education was assessed at the time of the cohort member's birth using a 3-point scale (no formal qualifications/secondary qualifications/tertiary qualifications). (b) Family socio-economic status was assessed at birth using the Elley–Irving revised index of socio-economic status for New Zealand (Elley & Irving, 1976).

Measures of family functioning. (a) Changes of parents (0–15 years): Using detailed information on patterns of family change gathered over the interval from birth to 15 years, a measure of family instability was constructed on the basis of a count of the number of changes of parents experienced by the child by age 15. (b) Parental history of criminality: When sample members were aged 15 years parents were questioned about their involvement in criminal offending. Sample members were classified as having a parental history of criminality if any parent reported a history of offending. (c) Childhood sexual abuse (0–16 years): At age 18 and 21 years, sample members were questioned about their experience of sexual abuse in childhood (<16 years) (Fergusson, Lynskey, & Horwood, 1996). For the purposes of the present analysis, sample members were classified as having experienced childhood sexual abuse if they reported at either age 18 or 21 any episode of abuse involving physical contact with a perpetrator. (d) Childhood physical abuse (0–16 years): At age 18 and 21 years sample members were questioned about the extent to which their parents used physical punishment during childhood (<16 years) using a 5-point scale (Fergusson & Lynskey, 1997). Sample members were classified as having experienced physical child abuse if they reported at either age 18 or 21 that at least one parent had regularly used physical punishment, had used physical punishment too often or too severely, or had treated them in a harsh and abusive manner.

Childhood conduct problems (7–9 years). At age 7, 8, 9 years the extent to which sample members exhibited tendencies to conduct disordered and oppositional behaviours was assessed using a scale that combined items from the Rutter (Rutter, Tizard, & Whitmore, 1970) and Conners (Conners, 1969, 1970) child behaviour rating scales. Separate ratings were obtained from the child's parent and class teacher. Parent and teacher ratings were summed for each year and then averaged over the interval from 7–9 years to provide a robust measure of the child's tendencies to conduct problems. The reliability of the resulting scale, assessed using coefficient α, was .97.

Child educational achievement. At each assessment from age 11–13 years, the child's class teacher was asked to rate the child's performance in each of five areas of the curriculum (reading, handwriting, written expression, spelling, mathematics) using a 5-point scale ranging from very good to very poor. To provide a global measure of the child's educational achievement over the interval from 11–13 years, the teacher ratings were summed across years and curriculum areas and then averaged to provide a teacher rating grade point average for each child. The reliability of this measure was $\alpha = .96$.

Measures of child personality. (a) Child neuroticism was assessed at age 14 years using a short-form version of the neuroticism scale of the Eysenck Personality Inventory (Eysenck & Eysenck, 1964). The reliability of this scale was $\alpha = .80$. (b) Child self-esteem was assessed at age 15 years using the Coopersmith Self-Esteem Inventory (SEI) (Coopersmith, 1981). The reliability of this scale, assessed using coefficient α, was .87.

Measures of adolescent adjustment. (a) Early onset sexual intercourse: At age 18 sample members were questioned about their sexual behaviours, including the age of onset of intercourse. Young people who reported that they had first had sex before age 16 were classified as having early sexual onset. (b) Substance use (15 years): At age 15 sample members were questioned about their use of tobacco, alcohol and cannabis. Tobacco use was assessed on the basis of a 5-point scale reflecting the current frequency of cigarette smoking at age 15. This scale ranged from 'non-smoker' through to 'daily smoker'. The frequency of alcohol use in the past 12 months was assessed using a 6-point scale that ranged from 'never' through to 'almost every day'. In addition, a dichotomous measure of cannabis use was created based on the young person's report of cannabis use in the past 12 months. (c) Mental health problems (15 years): At age 15, young people were administered a mental health interview that combined components of the Diagnostic Interview Schedule for Children (DISC) (Costello et al., 1982) and other measures to assess a range of DSM-III-R disorders in the cohort over the previous 12 months. This information was used to construct DSM-III-R diagnoses of major depression and anxiety disorders, including overanxious disorder, generalised anxiety disorder, social phobia and simple phobia. In addition, sample members were also questioned about the frequency of suicidal thoughts in the previous 12 months.

Young adult lifestyle factors. At each assessment from age 18 onwards participants were questioned about aspects of their living arrangements since the previous assessment including: a) living with parents and age of leaving the family home; and b) entry into cohabiting relationships.

Statistical analysis

The associations between pregnancy/abortion status and mental health at ages 15–18, 18–21, and 21–25 years (Table 1) were tested for statistical significance by fitting random effects models to the repeated measures data. For dichotomous outcomes (depression,

Table 1 Rates of disorder (15–18, 18–21, 21–25 years) by cumulative history of pregnancy/abortion to age 18, 21, 25 years respectively

Measure	Not Pregnant	Pregnant No Abortion	Pregnant Abortion	*p*
Major depression (%)				
15–18 years	31.2	35.7	78.6	
18–21 years	27.5	34.5	45.1	
21–25 years	21.3	30.5	41.9	
Pooled risk ratio (95% CI)[1]	.35[a] (.20–.59)	.49[a] (.27–.91)	1[b]	<.001
Anxiety disorder (%)				
15–18 years	37.9	35.7	64.3	
18–21 years	15.2	25.0	25.5	
21–25 years	16.9	29.8	39.2	
Pooled risk ratio (95% CI)[1]	.35[a] (.19–.63)	.54[a, b] (.27–1.07)	1[b]	.001
Suicidal ideation (%)				
15–18 years	23.0	25.0	50.0	
18–21 years	12.5	17.9	25.5	
21–25 years	8.0	13.0	27.0	
Pooled risk ratio (95% CI)[1]	.25[a] (.13–.50)	.31[a] (.14–.69)	1[b]	<.001
Alcohol dependence (%)				
15–18 years	5.2	7.1	.0	
18–21 years	4.3	6.0	5.9	
21–25 years	2.7	3.1	6.8	
Pooled risk ratio (95% CI)[1]	.53[a] (.17–1.61)	.56[a] (.15–2.10)	1[a]	.53
Illicit drug dependence (%)				
15–18 years	4.0	3.6	.0	
18–21 years	1.3	7.1	17.7	
21–25 years	1.7	4.6	12.2	
Pooled risk ratio (95% CI)[1]	.10[a] (.03–.32)	.16[a] (.04–.65)	1[b]	<.001
Mean (SD) number of mental health problems				
15–18 years	1.01 (1.13)	1.07 (1.39)	1.93 (.73)	
18–21 years	.61 (.96)	.90 (1.14)	1.20 (1.20)	
21–25 years	.50 (.85)	.81 (1.05)	1.27 (1.30)	
Pooled risk ratio (95% CI)[1]	.57[a] (.45–.72)	.66[a] (.50–.87)	1[b]	<.001
Sample sizes				
15–18 years	478	28	14	
18–21 years	375	84	51	
21–25 years	301	131	74	

[1]The results of planned comparisons of the rate of each outcome across the three groups are indicated by the superscripts ([a, b]). Different superscripts indicate that the groups were significantly ($p < .05$) different on their rates of disorder. Similar superscripts indicate that groups were not significantly different in their rates of disorder.

anxiety, suicidal ideation, substance dependence) logistic regression models were fitted, whereas for the count of number of mental health problems Poisson regression was used. For each outcome (Y) the general model fitted was of the form:

$$G(Yit) = B0 + B1X1it + B2X2it + Ui$$

where G(Yit) was the log odds of Y for the i-th individual in the t-th time interval for dichotomous outcomes or the log of the rate of problems for the i-th individual in the t-th time interval for the count of the number of mental health problems; X1it and X2it were time dynamic design variates reflecting the pregnancy/abortion status of the i-th individual up to the t-th interval, with X1it representing the Never Pregnant group and X2it the Pregnant No Abortion group, respectively, relative to the Abortion group; and Ui was an individual specific random effect. For each outcome a test of the overall significance of the pooled association with pregnancy/abortion history was obtained from a Wald chi squared test of the joint null hypothesis $B1 = 0$, $B2 = 0$. Estimates of the pooled risk ratios of disorder (odds ratios for dichotomous outcomes, incidence rate ratio for the problem count) in the Never Pregnant and Pregnant No Abortion groups relative to the Abortion group were given by e^{B1}, e^{B2} respectively.

The associations between pregnancy/abortion history and covariates (Table 2) were tested for statistical significance using the chi squared test of independence. The adjusted associations between pregnancy/abortion history and mental health outcomes (Table 3) were examined by extending the random effects models described above to include the covariate factors in Table 2. Finally, the association between pregnancy/abortion history prior to age 21 years and subsequent mental health problems from 21–25 years (Table 4) was modelled using Poisson regression in which the rate mental health problems was modelled as a log-linear function of pregnancy/abortion history prior to age 21 and covariates.

Results

Associations between pregnancy/abortion history and mental health outcomes

Table 1 shows the associations between pregnancy/abortion history (classified as not pregnant; pregnant no abortion; pregnant abortion) by ages 18, 21 and 25 years and measures of mental health assessed at ages 15–18, 18–21 and 21–25 years respectively. The

Table 2 Profile of social, family and childhood characteristics (0–15 years) and young adult lifestyle factors by pregnancy/abortion status (15–25 years)

Measure	Not Pregnant ($N = 301$)	Pregnant No Abortion ($N = 131$)	Pregnant Abortion ($N = 74$)	p^1
Socio-demographic background				
% Mother lacked formal educational qualifications	41.2	70.2	51.4	<.0001
% Family of semi-skilled, unskilled socio-economic status	15.0	34.4	31.1	<.0001
Family functioning				
% 3+ changes of parents (0–15 years)	10.6	34.4	28.4	<.0001
% Parental history of offending (15 years)	6.3	22.4	17.8	<.0001
% Childhood contact sexual abuse	11.3	31.8	25.7	<.0001
% Childhood physical abuse	7.0	26.9	32.4	<.0001
Childhood behaviour/educational achievement				
% In highest quartile of childhood conduct problems (7–9 years)	21.1	33.9	37.5	.002
% In lowest quartile on grade point average (11–13 years)	22.4	39.3	31.5	.002
Childhood personality				
% In highest quartile on neuroticism (14 years)	20.1	25.2	34.3	.038
% In lowest quartile on self-esteem (15 years)	19.2	32.8	38.0	<.001
Adolescent adjustment				
% Early onset sexual intercourse (<16 years)	13.0	42.3	35.6	<.0001
% Daily smoker (15 years)	3.3	19.0	14.1	<.0001
% Drinking alcohol at least monthly (15 years)	19.6	32.8	38.0	<.001
% Used cannabis (15 years)	4.4	16.4	15.5	<.0001
% Prior history of depression/anxiety disorder (15 years)	13.3	25.2	32.4	<.0001
% Prior history of suicidal ideation (15 years)	6.0	11.5	25.7	<.0001
Time dynamic lifestyle factors				
% Living with parents at				
18 years	88.0	55.7	55.4	<.0001
21 years	49.8	22.1	29.7	<.0001
25 years	21.3	16.8	12.2	.15
% Cohabiting with partner at				
18 years	2.0	18.3	14.9	<.0001
21 years	17.6	43.5	33.8	<.0001
25 years	44.9	66.4	59.5	<.0001
% Ever pregnant by age				
18 years	–	18.5	24.3	.32
21 years	–	60.3	73.0	.07

[1]Chi squared test of independence.

Table 3 Risk ratios[1] (95% CI) of disorder by pregnancy/abortion status after covariate adjustment

Measure	Not Pregnant	Pregnant No Abortion	Pregnant Abortion	p	Significant covariates[2]
Major depression	.48[a] (.27–.84)	.35[a] (.18–.67)	1[b]	.006	1–4, 6–9
Anxiety disorder	.52[a, b] (.27–1.02)	.44[a] (.21–.93)	1[b]	.082	2, 4, 8
Suicidal ideation	.42[a] (.21–.85)	.24[a] (.11–.56)	1[b]	.004	2, 3, 5, 6, 9–11
Illicit drug dependence	.20[a] (.06–.69)	.15[a] (.04–.63)	1[b]	.014	2, 10
Number of mental health problems	.66[a] (.52–.84)	.58[a] (.44–.76)	1[b]	<.001	2–5, 6, 8, 9

[1]The results of planned comparisons of the adjusted rate of each outcome across the three groups are indicated by the superscripts ([a, b]). Different superscripts indicate that the groups were significantly ($p < .05$) different in their adjusted rates of disorder. Similar superscripts indicate that groups were not significantly different in their adjusted rates of disorder.
[2]Significant covariates: 1 = maternal education; 2 = childhood sexual abuse; 3 = childhood physical abuse; 4 = child neuroticism (14 years); 5 = child self-esteem (15 years); 6 = grade point average (11–13 years); 7 = child smoking (15 years); 8 = prior history of depression/anxiety (15 years); 9 = prior history of suicidal ideation (15 years); 10 = living with parents; 11 = living with partner.

measures of mental health include DSM-IV major depression, anxiety disorder, alcohol and illicit drug dependence, suicidal ideation and total number of disorders. All comparisons were tested for overall statistical significance using a random effects model to estimate the association between pregnancy/abortion history and mental health (see Methods). Examination of the table shows:

Table 4 Covariate adjusted incidence rate ratios (95% CI) between number of mental health problems (21–25 years) and pregnancy/abortion history prior to age 21

	Not Pregnant	Pregnant No Abortion	Pregnant Abortion	*p*
Incidence rate ratio (95% CI)[1,2]	.60[a] (.44–.83)	.67[a] (.46–.97)	1[b]	.008

[1]The results of planned comparisons of the adjusted rate of each outcome across the three groups are indicated by the superscripts ([a, b]). Different superscripts indicate that the groups were significantly ($p < .05$) different in their adjusted rates of disorder. Similar superscripts indicate that groups were not significantly different in their adjusted rates of disorder.
[2]Significant covariates include: childhood sexual abuse; childhood physical abuse; self-esteem (15 years); grade point average (11–13 years).

1. For all outcomes, except alcohol dependence, there were significant ($p < .001$) associations between pregnancy history and rates of disorder. These associations reflected a tendency for rates of mental health problems to be highest amongst those having abortions and lowest amongst those who had not become pregnant, with those who became pregnant but did not have an abortion having rates that were intermediate between these extremes.
2. For all outcomes except alcohol dependence, the results of pairwise comparisons showed a generally similar pattern in which rates of disorder did not vary significantly ($p > .05$) between the never pregnant and pregnant no abortion groups. In all comparisons, those becoming pregnant and seeking abortions had significantly ($p < .05$) higher rates of disorder than the not pregnant group and, with the exception of anxiety disorder, significantly higher rates of disorder than the pregnant no abortion group.

Adjustment for confounding

A limitation of the analysis in Table 1 is that it does not take into account third or confounding factors that might explain the elevated rates of mental disorders amongst those having abortions. This issue is examined in Table 2, which shows the associations between pregnancy/abortion status by age 25 and a range of potential confounding factors. Examination of the table shows evidence of significant tendencies for those who became pregnant by age 25 to exhibit a profile characterised by greater childhood social and economic disadvantage, family dysfunction and individual adjustment problems. In addition, those who became pregnant were more likely to have left the family home at a young age and to have entered a cohabiting relationship.

To take into account the factors in Table 2 the associations between pregnancy/abortion history and mental health outcomes were adjusted by extending the random effects models to include covariate factors (see Methods). The results of this analysis are shown in Table 3, which reports the covariate adjusted risk ratios, the overall test of significance and the results of pairwise comparisons of the adjusted rates. For each analysis the table also reports the significant covariate factors. The table shows:

1. For four of the five outcomes (depression, suicidal ideation, illicit drug dependence, total mental health problems) the association with pregnancy/abortion history remained statistically significant ($p < .05$) after control for confounders. For the remaining outcome, anxiety disorder, the adjusted association was marginally significant ($p = .08$).
2. Pairwise comparisons showed that those who were not pregnant and those who were pregnant without abortion had adjusted rates of disorder that were not significantly different ($p > .05$). However, in all cases, the abortion group had significantly ($p < .05$) higher rates of disorder than the pregnant no abortion group, and with the exception of anxiety disorder, significantly ($p < .05$) higher rates than the not pregnant group.

A prospective analysis

A limitation of the analysis reported in Tables 1 and 3 is that the associations between pregnancy/abortion history and mental health involved the concurrent assessment of pregnancy status and mental health. This raises issues about the direction of any causal association since the results may be interpreted in two ways: (a) mental health problems lead to increased risks of abortion; or (b) abortion leads to increased risks of mental health problems. To address this issue, the analysis was extended to produce a prospective analysis in which pregnancy/abortion history prior to age 21 was used to predict mental health outcomes from 21–25 years. This analysis was limited to the overall number of disorders owing to the relatively sparse data for specific disorders over the interval 21–25 years and the smaller number of women who became pregnant by age 21.

The results of this analysis are summarised in Table 4 which shows estimates of the covariate adjusted incidence rate ratios for the number of mental health problems. The association between pregnancy/abortion history prior to 21 and number of mental health problems from 21–25 years remained statistically significant after covariate adjustment ($p = .008$). In addition, consistent with

the previous analysis, the results show a clear pattern in which, after covariate adjustment, those who were not pregnant and those who were pregnant but did not have an abortion had rates of disorder that were not significantly different ($p > .05$), whereas those having abortions had rates of disorder that were significantly ($p < .05$) higher than both of these groups.

Discussion

In this study we have used data gathered over a 25-year longitudinal study to examine linkages between mental health and exposure to abortion in adolescence and young adulthood. This study produced evidence consistent with the view that in young women, exposure to abortion was associated with a detectable increase in risks of concurrent and subsequent mental health problems. This conclusion is based on the following lines of evidence:

1. On the basis of concurrently assessed data (Table 1), young women reporting abortions had elevated rates of mental health problems when compared with those becoming pregnant without abortion and those not becoming pregnant.
2. These associations persisted after extensive control for a range of confounding factors, suggesting a possible causal linkage between exposure to abortion and mental health problems (Table 3).
3. To examine the direction of causation, a prospective analysis was conducted in which exposure to abortion by age 21 was used to predict subsequent mental health problems (Table 4). That analysis showed that even following control for confounding factors, exposure to abortion prior to age 21 was associated with increased risks of later mental health problems.

In general, these results are consistent with the view that exposure to abortion was associated with increased risks of mental health problems independently of confounding factors. The study estimates suggested that those who were not pregnant or those becoming pregnant but not having an abortion had overall rates of mental disorders that were between 58% and 67% of those becoming pregnant and having an abortion.

In comparison to previous research in this area, the present study has a number of clear strengths which include: a) the use of a longitudinal design in which pregnancy and mental health were assessed throughout adolescence into young adulthood; b) assessment of mental disorders using standardised diagnostic criteria; c) the availability of a range of concurrent and prospectively assessed covariate factors; d) adjusted contrasts between those having abortion and equivalent groups of those becoming pregnant and those not pregnant. To our knowledge, no previous study of this topic has combined all of these features to examine the linkages between abortion and mental health. However, whilst the present study has a number of strengths, there are some limitations that should not be overlooked. In particular, potential threats to study validity include:

1. *Omitted covariates*: Although the study findings show that young women exposed to abortion are at increased risks of mental health problems after adjustment for a range of confounding factors, the possibility that the association reflects sources of confounding that were not controlled should not be overlooked.
2. *Errors in the ascertainment of abortion:* Comparison of the rates of abortion reported by this cohort with a population estimate based on official record data suggested moderate accuracy in the reporting of abortion, with the reported rates for the cohort being 81% of the estimated population rate for women aged 15–25. These estimates suggested some underreporting of abortion in the cohort (see Methods). In turn, this raises the possibility that errors in the reporting of abortion may have distorted the results (Reardon & Cougle, 2002).
3. *The role of contextual factors*: An important threat to study validity comes from the lack of information on contextual factors associated with the decision to seek an abortion. It is clear that the decision to seek (or not seek) an abortion following pregnancy is likely to involve a complex process relating to: a) the extent to which the pregnancy is seen as wanted; b) the extent of family and partner support for seeking or not seeking an abortion; c) the woman's experiences in seeking and obtaining an abortion. It is possible, therefore, that the apparent associations between abortion and mental health found in this study may not reflect the traumatic effects of abortion *per se* but rather other factors which are associated with the process of seeking and obtaining an abortion. For example, it could be proposed that our results reflect the effects of unwanted pregnancy on mental health rather than the effects of abortion *per se* on mental health. The data available in this study was not sufficient to explore these options. However, it is our intention to study this cohort at age 30 and at that time it may be possible to gather further contextual information on the factors associated with decisions regarding abortion.

Notwithstanding the reservations and limitations above, the present research raises the possibility that for some young women, exposure to abortion is a traumatic life event which increases longer-term susceptibility to common mental disorders. These findings are inconsistent with the current consensus on the psychological effects of abortion. In particular, in its 2005 statement on abortion, the American

Psychological Association concluded that 'well-designed studies of psychological responses following abortion have consistently shown that risk of psychological harm is low ... the percentage of women who experience clinically relevant distress is small and appears to be no greater than in general samples of women of reproductive age' (American Psychological Association, 2005). This relatively strong conclusion about the absence of harm from abortion was based on a relatively small number of studies which had one or more of the following limitations: a) absence of comprehensive assessment of mental disorders; b) lack of comparison groups; and c) limited statistical controls. Furthermore, the statement appears to disregard the findings of a number of studies that had claimed to show negative effects for abortion (Cougle et al., 2003; Gissler et al., 1996; Reardon & Cougle, 2002).

On the basis of the current study, it is our view that the issue of whether or not abortion has harmful effects on mental health remains to be fully resolved. Certainly in this study, those young women who had abortions appeared to be at moderately increased risk of both concurrent and subsequent mental health problems when compared with equivalent groups of pregnant or non-pregnant peers. While it is possible to dismiss these findings as reflecting shortcomings in the assessment of exposure to abortion or control of confounders (see above), it is difficult to disregard the real possibility that abortion amongst young women is associated with increased risks of mental health problems. There is a clear need for further well-controlled studies to examine this issue before strong conclusions can be drawn about the extent to which exposure to abortion has harmful effects on the mental health of young women.

Acknowledgements

This research was funded by grants from the Health Research Council of New Zealand, the National Child Health Research Foundation, the Canterbury Medical Research Foundation and the New Zealand Lottery Grants Board.

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Manuscript accepted 23 May 2005